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EXAMINER

ELALLAM, AHMED

ART UNIT PAPER NUMBER

2662

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,623

Applicant(s)

HAGLER ET AL.

Examiner

AHMED ELALLAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is responsive to RCA filed on 4/14/2005.

Specification

1. The disclosure is objected to because of the following informalities:

On page 7, line 26, the numeral character 302 should be changed to 202.

On page 8, line 14, the word "lines" should be changed to wires. And the numeral character 316 should be deleted.

In the amendment to the specification filed on 4/14/2005, Applicant amended the paragraph beginning on page 8, line 4. However, the same paragraph had been previously amended on 8/3/2004. Examiner assumes that Applicant inadvertently overlooked the previous amendment. Applicant is required to amend the paragraph beginning on page 8, line 4 in accordance with the previous amendment filed on 8/3/2004.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 4-12, 13-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what is meant by "automatically detecting if a DSL communication circuit exists on said analogue telephone line". More specifically, as understood from the specification, and as indicated in claim 13, the DSL circuit is built in the DSL modem. The existence of the DSL circuit on the DSL modem does not require any detection of the existence of the DSL circuit, because such existence is *a priori* known. Therefore, it is not clear, if the claimed limitation addresses another DSL circuit other than the one in the modem, or it means that a "hardware connection" exist between the analogue line and the DSL circuit of the modem. It is within this latest meaning that Examiner had interpreted the claimed limitation in the rejection of the claims.

With regard to claims 4-12, claims 4-12 depends from claim 1, thus they are subject to the same rejection.

Regarding claim 13, the claimed "determining available communication resources on the analog telephone line" and automatically configuring the DSL modem based on the available communication resources" are confusing, because it is not clear what the communication resources consist of. More specifically, the fact that dependent claims 15, 18 respectively specify that the storing results of ascertaining and testing step are part of the available resources (claim 15) and storing the response signal as part of the available resources (claim 18), cast a doubt to what other than the specified

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communication resources can be as indicated in base claim 13. In addition the terminology of "communication resources" is well known in the art to mean available bandwidth, capacity or processing components, and therefore the meaning of the claimed available resources is vague since it does not comply with known terminology.

Claims 14, 16, 17, 19-21 depends from claim 13, thus they are subject to the same rejection.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Burd et al, US (6,874,041), Hereinafter referred to as Burd.

Regarding claim 1, with reference to figures 6A and 11, Burd discloses a method for automatic configuration of a DSL modem 200 connected to an analogue line 204, comprising:

Automatically determining the presence or absence of a connection between a DSLM at a central office and communication circuitry 214 (claimed automatically determining available communication resources on the analogue communication line) comprising:

Initiating the automatic configuring of the DSL modem by transmitting over an inner pair a tone request or other similar request to the DSLAM equipment, monitoring for an acknowledgment tone on the inner pair (claimed automatically detecting if a DSL communication circuit exist on the analog telephone line);

If a tone is received over the inner pair within a predetermined period of time, initialization process is enabled on the inner pair, (claimed establishing a first connection between a first pair of wires of the analog telephone line and the DSL modem); (Examiner interpreted the time-out period for receiving acknowledge signal as being the claimed ascertaining whether a DSL communication circuit exist on the first connection (see column 10, lines 40-46));

If a determination is made that an acknowledgment is not received within the time-out period, initiating a connecting to outer pair, (see column 10, lines 50-61) (claimed generating a second connection between a second pair of wires of the analog telephone line and the DSL modem); transmitting a tone request on the outer pair to the DSLAM at the central office, and monitor for an acknowledge tone (see column 10, lines

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62-65), (claimed testing whether a DSL communication circuit exists on said second connection);

It is inherent to Burd that some communication parameters determined in the configuring the DSL modem should be saved, because they need to be used in communicating with remote devices, for example, as indicated above, once Burd receive an acknowledgment from the inner pair, it doesn't send another tone over the outer pair, and therefore some form of storing the results of the ascertaining and testing results are inherently taken in consideration) (claimed storing results of the ascertaining steps as at least part of said available resources).

Regarding claim 4, Burd discloses a relay 230 (figure 6) (or a switch, figure 7, unit 211) for switching between the inner and outer connections; see column 7, lines 34-52 and column 10, 50-61. (Claimed establishing and generating steps further comprise the step of switching between the first and second connections using a relay).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burd in view of Lo, US 2002/0026504. Hereinafter referred to as Lo.

Regarding claim 5, in addition to the above (claim 1), Burd discloses transmitting a tone to DSLAM or remote communication apparatus and receiving an acknowledgment from the remote communication apparatus; see column lines 56-61, (The remote apparatus can be connected to the Internet, see figure 1). (Claimed determining the communication resources comprises automatically identifying communication route for communications between the DSL modem and a communication network).

Burd does not specify that the route is a virtual.

However, Lo discloses automatically identifying a virtual communication route for communicating between a broadband modem and a broadband network 120, see paragraph [0021]. It would have been obvious to a person of ordinary skill in the art, at the time of the invention to enable the DSL modem of Burd to implement the virtual route identification as taught by Lo so that the remote devices of Burd can be located in virtual networks. It would be advantageous to adapt the automatic configuration of Lo' DSL modem to a variety of networks.

Regarding claim 6, Burd discloses a test signal (tone signal) and an acknowledgment to the test signal as indicated above with reference to claim 1.

Burd doesn't disclose a plurality of test signal and storing the acknowledgment signal.

However, Lo discloses transmitting multiple discover packets by broadband modem, see paragraph [0020]. (Reads on transmitting a plurality of test signals to the communication network); and storing a response signal, see [0023]. It would have been

obvious to a person of ordinary skill in the art, at the time the invention was made to use a plurality of test signal as taught by Lo in lieu of one test signal of Burd so to increase reliability in determining the existence of a connection between the DSL modem of Lo and the DSLAM (or remote device); in addition storing the response to the test signal would result in reducing the processing in the automatic configuration of Lo modem by not sending further tests to the other pair (outer pair).

Regarding claim 7, Burd doesn't disclose the transmitting step of test signal comprise sending a plurality of test cells to an ATM network, where each test cell contains a different test VPI/VCI pair.

However, Lo discloses that the plurality of sets of configuration values includes a subset of commonly used VPI values and VCI values. The broadband modem transmits these values to a network access device by way of discover packets until a correct configuration match is found. See [0009]. (Reads on sending a plurality of test cells to an ATM network, where each test cell contains a different test VPI/VCI pair).

Regarding claim 8, Burd doesn't disclose the receiving step further comprises the step of acquiring a single response cell from ATM network, where the single response cell contains a single response VPI/VCI pair for communicating with the ATM network.

However, Lo discloses that the broadband modem determine the correct configuration information from the received response packet, and determine the presence of broadband service associated with the correction configuration information, and that correct configuration information includes a VPI value, a VCI value. See paragraph [0021]. (Reads on receiving step further comprises the step of

acquiring a single response cell from the ATM network, where the single response cell contains a single response VPI/VCI pair for communicating with the ATM network).

Regarding claim 9, Burd discloses a DSLAM at a central office and transmitting test signal to the DSLAM and receiving a response to the test signal as indicated above with reference to claim 1, except that Burd doesn't disclose prior to acquiring a response to the test signal, matching a response VPI/VCI pairs with a VPI/VCI pair contained in within a static list of at least some VPI/VCI pairs that the DSLAM is configured with.

However, with reference to figure 1 and 2, Lo discloses a DSLAM between the broadband network 120 (ATM network) and the broadband modem, Lo also discloses a search module 224 (figure .2) configured to determine which set of configuration values stored in configuration table 220 is appropriate for establishing communications between broadband modem 160 and access concentrator 190 through the DSLAM, and that the search module select a set of configuration values (i.e.: VPI, VCI) from a configuration table (claimed static list of VPI/VCI pairs), see paragraph [0019] and that in response to the discover packet a determination is made with the proper VPI/VCI pair (indicated above). (Reads on matching a response VPI/VCI pairs with a VPI/VCI pair contained in within a static list of at least some VPI/VCI pairs that the DSLAM is configured with).

Therefore, It would have been obvious to a person of ordinary skill in the art, at the time the invention was made to use the testing method of Lo of transmitting ATM test cells and acquiring a response having a single VPI/VCI pair in the auto configuring

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modem of Lo and using the VPI/VCI matching as taught by Lo along the DSLAM preconfigured VPI/VCI set up applied to the DSLAM of Burd so that auto configuring can be carried out using remote devices connected to ATM networks. The advantage would be the ability to adapt the Modem of Lo, after the automatic configuration, to communicate over existing ATM networks to the remote devices using established ATM communication standards and taking advantage of the capabilities provided by the DSLAM in providing the ATM connections.

Regarding claim 10, Burd in view of Lo disclose all the limitation of the parent claim 8, and in addition it discloses the responses to discover packet are provided by access devices, such as access concentrator 190. See Lo [0010].

Burd in view of Lo do not explicitly disclose retrieving the response packet from a configuration server.

However, Lo discloses that other network devices for providing a response are within the scope of the invention. See [0014].

Therefore, it would have been obvious to an ordinary person of skill in the art, at the time the invention was made to use a configuration server for providing responses instead of the access concentrator so that the system of Burd in view of Lo would have more flexibility to configure Modems as the demand for service increases.

Regarding claim 11, with reference to figure1, Burd discloses that the acknowledgment can be received from a communication device at a remote location. See column 10, lines 31-39. (Examiner interpreted the communication device at a

remote location as being the claimed retrieving the response cell from a host via the Internet. remote device.

Regarding claim 12, with reference to figure 1, Burd discloses that the acknowledgment is received from a DSLAM. See column 10, lines 27-31.

Claims 13-21:

Regarding claim 13, with reference to figures 6 and 7, Burd discloses an auto-configuring DSL modem comprising:

A communication circuitry 214 that communicate data along an analogue line (outer pair of wires 206 and inner pair of wires 208) (claimed DSL circuit that communicate data along an analogue telephone line);

A relay 210 for switching a connection between the communication circuitry and a first pair of wires 208 of the analog line and a second pair of wires 206 of the analog telephone line (claimed a relay for switching a connection between the DSL circuit and a first pair of wires of the analogue telephone line and a second pair of wires of the analog telephone line); see column 7, lines 12-42

Burd further discloses connecting the communication circuitry to the analogue telephone line, see column 10, lines 27-49, (claimed connecting the DSL circuit to the analogue telephone line); and if a tone is received over the inner pair within a predetermined period of time, initialization process is enabled on the inner pair, (see column 10, lines 40-46)); and If a determination is made that an acknowledgment is not received within the time-out period, initiating a connecting to outer pair, (see column 10, lines 50-61) (claimed generating a second connection between a second pair of wires of

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the analog telephone line and the DSL modem); transmitting a tone request on the outer pair to the DSLAM at the central office, and monitor for an acknowledge tone (see column 10, lines 62-65), (claimed determining available communication resources on the analogue telephone line; and automatically configuring the DSL modem based on the available communication resources).

Burd does not disclose a memory having instruction for implementing the steps indicated above of connecting, determining and automatic configuring.

Regarding claim 14, Burd discloses initiating the automatic configuring of the DSL modem by transmitting over an inner pair a tone request or other similar request to the DSLAM equipment, and monitoring for an acknowledgment tone on the inner pair. See column 10, lines 40-46. (Claimed automatically detecting if a DSL communication circuit exist on the analogue telephone line).

Burd doesn't disclose a memory having instructions for implementing the step of detecting.

Regarding claim 15, as indicated above with reference to claim 1, Burd discloses all the steps of claim 15, except it does not disclose a memory having instruction for implementing the steps.

Regarding claim 16, as indicated above with reference to claim 1 and 13, Burd discloses the steps establishing the first connection and generating a second connection and switching between connections using the relay 210. Burd does not disclose a memory having instruction for implementing these steps.

Regarding claims 17-21 claims 17-21 have the same scope of respective claims 5-9, with the difference of having the instruction for implementing the various steps.

However, Lo with reference to figure 2, discloses a broadband modem having a memory 204 comprising instructions for implementing various steps for automatic configuration of the modem. See paragraph [0014], [0019] and [0021].

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made to provide the modem of Burd with a memory similar to that of Lo, having the necessary instructions codes, so that the auto-configuration steps of Burd can be implemented. A skilled artisan would be motivated to do so by realizing the need of some storage means for storing the necessary instruction codes for implementing the various steps of Burd in view of Lo auto-configuration applied to different type of DSL modem services. (Burd column 8, lines 52-54).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Eames, US (6,282,189); Swisher et al, US 202/0191644; Turner, US (6,728,309); and Binder, US (2005/0117603).


7. The Examiner had accepted the changes made to the specification and drawings 1 and 2.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou Hassan can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHMED ELALLAM
Examiner
Art Unit 2662
June 23, 2005



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